Abstract of the Disclosure

The invention relates to a coordinate measuring device for measuring workpieces (7). Said device comprises at least one scanning pin (12) which can be fixed to a scanning head (5) which can be displaced in the direction of the coordinates (x, y, z). Said scanning pin or scanning pins (12) comprise shanks (14a to 14c) to which ends a scanning body (13a to 13c) is fixed, at least two of said scanning shanks being differently oriented when the scanning pin (12) or pins concerned are conventionally fixed to the scanning head (5). The inventive device also comprises a control and evaluation unit (9) for controlling the course of measurement and for evaluating the measuring points thus recorded. In order to determine in an automated manner at least one suitable scanning shank (14a to 14e) for measuring a geometric element on a workpiece, the control and evaluation unit (9) can carry out the following method: at least one characteristic piece of directional information (n_i) is determined for the points to be measured of a geometric element (29 to 32) to be measured on the workpiece (7, 15, 16), either on the basis of the measured measuring points (P_1 to P_4) or according to predefined nominal data of the geometric element; and at least one scanning shank (14a to 14c) suitable for measuring the measuring points of the geometric element is determined from the cited directional information (n_i).